Chapter	
	II
Date	
	February, 1978

GUIDE ON EDP ADMINISTRATION

MANAGEMENT RESPONSIBILITIES FOR EDP
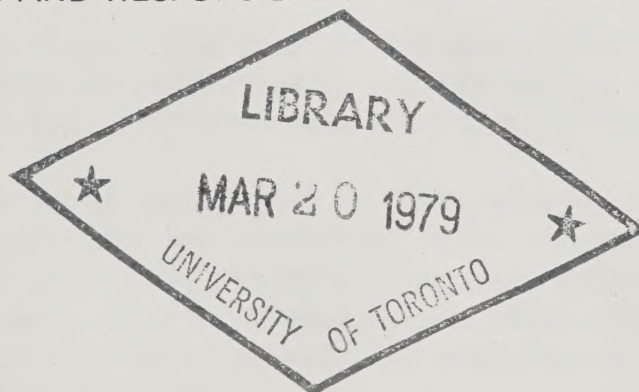
MANAGEMENT RESPONSIBILITIES FOR EDP

PURPOSE

This chapter identifies a number of basic EDP management requirements, including the development and implementation of a departmental EDP policy, plans, standard practices and control mechanisms, and the conduct of on-going evaluation and periodic audits. Developed and applied in an appropriate degree and manner, these requirements should assist departments in managing and evaluating their EDP activities in terms of the effectiveness with which their objectives are being achieved in support of departmental programs and the efficiency with which the activities are being administered. As well, the basis should be provided for an on-going performance improvement program.

DIRECTIVES

Each department and agency shall:

0.1 Develop, implement and maintain an appropriate departmental EDP policy outlining the manner in which EDP support to program objectives will be provided, administered and controlled, and identifying organizational roles, responsibilities and inter-relationships.

0.2 Administer and control its EDP activities in accordance with plans developed jointly by departmental providers and users of EDP services, and approved by senior departmental management.

0.3 Establish standard EDP practices and control mechanisms that reflect the department's own circumstances and requirements, using as a basis applicable government or industry standards and preferred practices.

0.4 As an on-going management function, evaluate and measure, in appropriate qualitative and quantitative terms, the performance of its EDP activities, particularly the effectiveness with which program objectives are being supported, the efficiency with which the activities are being administered, and compliance with departmental and government-wide EDP and related policies.

0.5 Ensure that an independent audit of the financial, operational and security aspects of departmental EDP activities is undertaken on a periodic basis by qualified personnel organizationally independent of the providers of the EDP service and that, where appropriate, supporting EDP activities be included within the scope of departmental management audits.

0.6 Ensure that observations and recommendations for performance improvement arising from on-going evaluation and periodic independent audits are thoroughly assessed and acted upon as appropriate.

1. **Departmental EDP Policy** (Directive 0.1)

The departmental EDP policy should be developed in sufficient detail to provide a common understanding, on the part of departmental management, EDP users, and providers of EDP services, of the management philosophy and practices of the department with respect to EDP. The policy should be used to ensure coordination in the provision of EDP services throughout the department and to provide a basis for the on-going management, evaluation and improvement of EDP activities.

The policy should cover such items as:

—   the structure and organizational placement within the department of the organization(s) providing EDP services;

—   a statement of the roles and responsibilities of the EDP organization(s);

—   the objectives to be attained in using EDP in support of departmental programs;

—   a description of the basic approach to and philosophy of the provision of EDP services, for example, the choice of centralized or decentralized services and in-house or private-sector facilities;

—   designation of departmental EDP advisors or coordinators, as appropriate;

—   inter-relationships of management, EDP users and the EDP organization(s), including the establishment of management and user committees, and a definition of responsibilities for the establishment of priorities, project authorization and review procedures, and funding arrangements; and

—   inter-relationships of the EDP organization(s) and other departmental information systems activities, such as telecommunications, micrographics, word processing, and management improvement services.

2. **Planning** (Directive 0.2)

Departments should use a two-phased approach in planning their EDP activities:

—   developing a long-range strategy on the nature and scope of EDP support to programs in accordance with departmental program objectives and priorities; and

— preparing short-term plans that describe the more immediate objec-
tives and operational requirements of the EDP organization(s) in
response to user needs and the means by which they will be achieved,
in sufficient detail to assist in the on-going management and evalua-
tion of EDP activities.

To be meaningful and effective, such plans must be jointly developed by
providers and users and must receive the full support and approval of senior
management.

Chapter III, "Planning and Approvals for EDP Needs", requires that an
annual EDP report and plan be submitted to the Treasury Board Secretariat. The
planning portion of the submission should be based on the EDP plans in use
within the department.

3.   **Standard Practices and Control Mechanisms** (Directive 0.3)

The effectiveness and efficiency with which EDP activities are adminis-
tered in support of departmental programs can be improved by implementing
suitable standard practices and control mechanisms in such areas as: project
management and control, documentation, systems and programming, data
management, procurement, computer operations, charges for services, cost
controls, security, management and financial audit trails, quality assurance, and
performance measurement. In many instances departments may be able to use,
with minor modification, already developed standard practices, control mecha-
nisms and standards. On the other hand, because of unique circumstances
departments may occasionally find it necessary to develop specific controls and
standards.

Guidance in this area can be obtained from the following sources:
Chapters IV through XI of this Guide; *Computer Control Guidelines* (Canadian
Institute of Chartered Accountants, 1970); and *Data Processing Control Practices
Report* (Institute of Internal Auditors, 1977).

4.   **Evaluation and Measurement** (Directive 0.4)

Evaluation is the process of reviewing an activity to determine whether it
is accomplishing its stated objectives and to identify opportunities for improved
performance. The evaluation criteria, in other words the measures of perfor-
mance, are generally stated in terms of effectiveness (doing the right things) and
thereafter efficiency (doing these things in the best manner). As stated in
Circular Letter 1976-25, "Measurement of the Performance of Government
Operations", Treasury Board policy requires that departments routinely measure
the on-going performance of their operations.

The essentials of the evaluation process are:

— defining what is to be evaluated;

— measuring performance in a manner which will facilitate com-
parisons and assess progress towards the achievement of objectives;
and

—   assessing the results of measurements made and reviewing the non-measurable aspects of the subject activity, including its relationship to other activities.

These three steps constitute the evaluation process itself. The process is of minimal value unless one additional step is also undertaken:

—   acting on the evaluation results thereby improving the activity.

Ideally, the evaluation of an activity should be done by applying precise quantitative measurement techniques that are objective and free of intuitive judgements. This is not always possible in the EDP environment, however, because EDP performance depends upon a complex interaction between human behavior and high-level technology. In practice, evaluation does not have to be an overly detailed statistical or mechanistic process. It does have to be an on-going management function, appropriately structured in detail and time required, meaningful in the organizational context, and useful in producing results that can be acted upon. The evaluation process must actively involve those engaged in the EDP activity, those responsible for its management, and those who use or are affected by its product in attaining program objectives. It must be a cooperative and coordinated process that gives full consideration to all the various interests and factors involved.

Generally, an EDP performance evaluation should include a quantitative and qualitative examination of at least the following:

—   adequacy of EDP support to program objectives, including management views on the EDP organization's effectiveness and users' assessment of EDP services requested and received;

—   actual performance measured against plans;

—   compliance with departmental and government-wide policies;

—   client/supplier relationships, including contractual performance;

—   compliance with standard practices and control mechanisms, including adherence to project development and control methodology;

—   operational performance measured against stated criteria;

—   adequacy of security precautions;

—   action taken on any previously identified remedial suggestions.

There is no single mechanism to evaluate the performance of all EDP activities within a department and certainly not for the EDP activities of all departments. A combination of mechanisms, again depending on organizational circumstances, is most liekly to be the best way to handle evaluation. Useful references in this Guide include Chapter IV, "Project Development and

3.   Telecommunications Advisory Committee

The Telecommunications Advisory Committee advises and assists the Department of Communications in the long-range planning and coordination of the use of telecommunications on a government-wide basis under the terms of reference given in the *Guide on Telecommunications Administration*.

D.   DATA PROCESSING INSTITUTE OF THE FEDERAL INSTITUTE OF MANAGEMENT

The Data Processing Institute is one of several professional bodies that form a part of the Federal Institute of Management. The objective of the Institute is to promote the development and use of efficient data processing and information handling practices for the benefit of the federal government and the Canadian people. General membership is open to personnel in any department or agency of the Canadian government who are directly concerned with the operation or management of data processing equipment or who are interested in applying or improving data processing techniques.

APPENDIX II-1

ROLES AND RESPONSIBILITIES

A.   INTRODUCTION

This appendix identifies the most important inter-relationships and responsibilities of those government organizations specifically concerned with the administration, coordination and use of EDP within the federal government. Detailed information on any of the organizations can be obtained by referring to a specific subject chapter in this Guide or by directly contacting the organization.

B.   SPECIAL DEPARTMENTAL ROLES

1.   Department of Communications

The Services Sector of the Department of Communications includes the Government Telecommunications Agency. This agency has the responsibility to plan, manage and coordinate government telecommunications facilities and services (both analog and digital) that will satisfy the requested needs of federal departments and agencies on an economical basis. The Services Sector also includes the Security and Communications Support Services Branch, which assists federal departments and agencies in the planning of continuity of service and the security of communications. The activities of the Department of Communications in these areas are described in more detail in the Treasury Board *Guide on Telecommunications Administration* (1977).

2.   Department of Industry, Trade and Commerce

The Department of Industry, Trade and Commerce, in conjunction with other concerned departments, is responsible for the preparation of the government's policies and plans for the development of the computer industry in Canada. Such policies and plans can affect major EDP procurements, and the implementation of government industrial policy can be furthered by government procurement practices. Industry, Trade and Commerce provides advice and assistance to appropriate departments and to the Treasury Board Secretariat on the economic aspects of government procurements in general and on significant purchases that affect the development of the Canadian EDP industry in particular.

3.   Public Archives

The Public Archives is responsible for fostering the good management of public records, including those produced by EDP, in such areas as records scheduling, maintenance, and retention, and for maintaining records designated for archival retention. The Archives also provides advice and technical assistance to departments on the procurement and use of microfilm services and equipment, as outlined in Chapter VI, "Procurement of EDP Goods and Services", and off-site storage for departmental records.

4.   Public Service Commission

The Public Service Commission is responsible for developing and periodically reviewing EDP Personnel Selection Standards and for recruiting and selecting personnel (some authority in this regard has been delegated from the Commission to departments). The Commission is also responsible for operating and assisting deputy heads in the operation of staff training and development programs on EDP or EDP-related subjects.

5.   Royal Canadian Mounted Police

The Commissioner, RCM Police is responsible for advising deputy ministers and heads of agencies on the implementation of government EDP security policies as outlined in directives, regulations and instructions consistent with responsibilities allocated in Chapter X, "Security in an EDP Environment".

The EDP Security Evaluation and Inspection Team is organized and operated by the Commissioner, RCM Police. The Team inspects EDP facilities that process government information and provides security evaluation reports and recommendations. The services of the Team should normally be arranged through the Departmental Security Officer.

6.   Statistics Canada

Statistics Canada has a statutory responsibility to collaborate with government departments in the collection, compilation and publication of statistical information, including statistics derived from the activities of those departments. It is also responsible for promoting the avoidance of duplication in the information collected by departments. These two responsibilities indicate the need for Statistics Canada's involvement in the planning, creation and operation of the administrative records system of departments, whenever these systems might be a useful part of the national statistical data base, subject to confidentiality requirements and other relevant constraints. In addition, Statistics Canada is required to review departmental plans for surveys directed to more than ten respondents.

7.   **Department of Supply and Services — Services**

Through its Bureau of Management Consulting, the Services Administration of the Department of Supply and Services offers a wide range of consulting services to all departments on a request basis. In the EDP area, the Management Information and Analysis Division provides assistance on such aspects as departmental EDP policy, EDP planning, standards and controls, feasibility studies, project definition and selection, systems design and implementation, EDP performance evaluation and measurement, pre- and post-implementation audits, and organizational aspects of delivering required EDP support. In addition, more general management services are available in such fields as organization analysis, financial controls, methods and procedures analysis, general survey work, facilities planning and operations research.

The Audit Services Bureau provides, on a request basis, a range of services that include pre- and post-implementation system audits on control and validity of data, and operational audit to determine the efficiency and effectiveness of EDP operations. It has at its disposal audit programs compatible with most data processing hardware to retrieve and analyse financial data.

8.   **Department of Supply and Services — Supply**

The Supply Administration of the Department of Supply and Services is charged with the provision of an efficient and effective procurement service for EDP goods and services for departments and agencies. The department's primary responsibilities are described in Chapter VI, "Procurement of EDP Goods and Services". The Electronics and Data Processing Products Centre is the organization that handles EDP acquisitions.

The Security Services Branch of the Supply Administration is responsible for the security clearance of industries or firms on contract to the government and arranges for RCM Police Security Evaluation and Inspection Teams when required.

9.   **Treasury Board Secretariat**

a.   **Administrative Policy Branch: Information Systems Division**

In the EDP area, the Information Systems Division is responsible for developing, revising and interpreting policies and guidelines for EDP planning, procurement, operations and evaluation, and for reviewing and recommending action on departmental plans and related submissions. The Division also monitors the progress of government EDP, including participation in reviews of projects and assessments of the level of service of particular operations, and ensures the sharing of information relating to EDP within the federal public service.

b.   **Efficiency Evaluation Branch**

The Efficiency Evaluation Branch is responsible for formulating Treasury Board policies on performance measurement. It also provides implementation assistance to departments on a consultative basis.

c.   **Personnel Policy Branch**

The Personnel Policy Branch is responsible for developing and interpreting occupational group definitions, classification standards, and pay structures that apply to EDP personnel; negotiating collective agreements with the representatives of unions that bargain for EDP personnel; and establishing and evaluating training priorities and policies.

d.   **Program Branch**

Based on the analysis of departmental plans and programs, the Program Branch recommends to the Treasury Board the acceptance or modification of specified resource allocation proposals. The Program Branch obtains advice from the Information Systems Division on the EDP content of proposals and submissions in support of departmental programs, and provides assistance to the Information Systems Divisions in its EDP planning and review activities.

10.   **Office of the Comptroller General**

The Comptroller General is responsible for developing and evaluating Treasury Board Policy in the areas of financial administration, internal audit, and financial systems. Standards, policies and evaluation programs implemented in these areas can have significant implications for departments whose EDP activities are financially oriented.

C.   INTERDEPARTMENTAL COMMITTEES

1.   **Advisory Committee on Information Systems**

The primary responsibilities of the Committee are: to review and advise on proposed and existing information systems policy and guidelines, including amendments, thereby ensuring that common departmental concerns are taken into account, and to advise on the impact of the Information Systems Division's actions and proposals on the government's information systems community. Members of the Committee are senior officials from various departments directly or indirectly involved in the use and provision of information systems facilities and services.

2.   **Government EDP Standards Committee**

This Committee is responsible for approving all EDP standards recommended for federal government use and for coordinating the work of federal government officers in national or international agencies concerned with EDP standards. The work of this Committee is supported by a Secretariat within the Services Administration, Department of Supply and Services.

Control", and Chapter VIII, "Computer Performance Improvement", as well as other Treasury Board documents: *Operational Performance Measurement: A Managerial Overview* (Volume 1) and *Techniques* (Volume 2) and *Benefit-Cost Analysis Guide*, March 1976.

5.   **Audit** (Directive 0.5)

Audit, for the purposes of this chapter, is the process of independently reviewing and appraising the effectiveness and efficiency of the financial, operational and security aspects of departmental EDP activities. The various elements of an audit may be conducted separately but they should be closely coordinated to eliminate duplication of effort or omissions. The audit should be conducted on a periodic basis by qualified audit personnel who are organizationally independent of the managers directly responsible for the activities subject to audit.

The main purpose of the EDP audit is to provide senior and EDP management with an independent assessment of the departments' EDP activities, including identification of problem areas. Such audits can contribute significantly to the improvement of the EDP activity itself and to the strengthening of communications between the EDP function and senior management.

Guidance in this area can be obtained from the following sources: *Computer Audit Guidelines* (Canadian Institute of Chartered Accountants, 1975); *L'audit informatique* (Claude Saint-Antonin, Masson, 1976); *Data Processing Audit Practices Report* (Institute of Internal Auditors, 1977); *Guide on Financial Administration* (Treasury Board, 1973); and *Standards for Internal Financial Audit* (Treasury Board, 1978).

6.   **Performance Improvements** (Directive 0.6)

A performance improvement program should be aimed at improving the economic use of resources so that the right resources are used for the right things and in the right way. In an EDP environment, such a program can be used to implement the management requirements outlined in the preceding sections, specifically: development of and compliance with a departmental policy; development and use of a departmental EDP plan and measurement of performance against this plan; implementation of standard practices and control mechanisms; and conduct of evaluations and periodic audits, with subsequent assessment of and action on the resulting observations and recommendations.

7.   **Roles and Responsibilities**

In applying this chapter's management practices, departmental personnel may find it necessary to contact other government organizations concerned with administering, coordinating and using EDP within the federal government. An organizational reference is provided in Appendix II-1.